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Notice of Allowance: September 20, 2004

PATENT

Docket No. MTI-31607

IN THE UNITED STATES PATENT AND TRADEMARK OFFICERECEIVED
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SEP 27 2004

Applicant : Lee, Teck Kheng
Serial No. : 10/050,507
Filing Date : January 16, 2002
For: Elimination of RDL Using Tape Base Flip Chip on Flex for Die Stacking
Group Art Unit: 2813
Confirmation No.: 7687
Examiner : THOMPSON, Craig

CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10

I hereby certify that, on the date shown below, this correspondence is being transmitted by facsimile to Fax No. (703) 872-9306 addressed to Examiner Craig Thompson at the U.S. Patent and Trademark Office.

Date: 9-27-4 Patricia Rickard**Mail Stop ISSUE FEE**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

COMMUNICATION

Sir:

Enclosed herewith is a copy of the following documents that were earlier submitted to the

Examiner:

- **Information Disclosure Statement/Form 1449** submitted by first class mail on **September 9, 2004** with PTO-stamped return postcard.
- **Information Disclosure Statement/Form 1449** submitted by facsimile on **September 20, 2004** with Auto-Reply Facsimile Transmission. The PAIR records indicate that this IDS/Form 1449 was entered for this application.

The Examiner is requested to acknowledge receipt of the above documents, and return an initialed copy of each of the Forms 1449 to Applicant.

Respectfully submitted,

Kristine M. Strodthoff
Kristine M. Strodthoff
Reg. No. 34,259

Dated: September 27, 2004

WHYTE HIRSCHBOECK DUDEK S.C.

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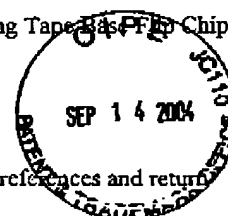
THE STAMP OF THE U.S. PATENT OFFICE HEREON DENOTES RECEIPT
ON THE DATE STAMPED OF:

In re Application of : Lee, Teck Kheng
Serial No. : 10/050,507
Filing Date : January 16, 2002
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Flex for Die Stacking
Atty. Docket No. : MTI-31607

IDS Transmittal

Enclosures: IDS Transmittal; PTO-1449; twenty-two (22) references and return
postcard.

DATE MAILED: September 9, 2004
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 Page

09/20/04 09:29 FAX 414 224 5834 W. H. D. 001	
<p>Patent Attorney Docket No.: MII-31607</p> <p>IN THE UNITED STATES PATENT AND TRADEMARK OFFICE</p> <p>In re Application of : Teak Kheng Lee Serial No. : 10/050,507 Confirmation No. : 7687 Filing Date : January 16, 2002 For : Elimination of RDL Using Tape Base Flip Chip on Next Int Die Group Art Unit : 2812</p>	
<p>CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10</p> <p>I hereby certify that, on the date shown below, the correspondence is being:</p> <p><input type="checkbox"/> deposited with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231</p> <p><input type="checkbox"/> 37 CFR 1.8(a) with sufficient postage to first class mail <input type="checkbox"/> 37 CFR 1.10 As "Request Mail Post Office to Addresser"</p> <p><input checked="" type="checkbox"/> transmitted by facsimile to Fax No. 414-224-5834 addressed to Examiner Craig Thompson at the Patent and Trademark Office.</p> <p>Date: 9-20-04 2004 <i>Patricia Ray Pickens</i></p> <p>Correspondence for Patents P.O. Box 1450 Alexandria, VA 22313-1450</p>	
<p>INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97(b)</p> <p>Sir:</p> <p>In compliance with Applicant's duty of disclosure as set forth in 37 C.F.R. § 1.56, listed on the attached Form PTO-1449 are those patents and other publications known to Applicant which may be considered pertinent to the patentability of the claims of the above-identified application.</p> <p>Applicant respectfully requests that the Examiner consider the documents listed on the attached Form PTO-1449, that these references be made of record in the present application, and that an initialed copy of the attached Form PTO-1449 be returned to the undersigned in accordance with MPEP 609.</p> <p>Respectfully submitted, <i>Kristine M. Szymanski</i> Kristine M. Szymanski, Reg. No. 34259</p> <p>Date: September 20, 2004</p> <p>WHYTE HIRSCHBOECK DUDEK S.C. 555 East Wells Street, Suite 1900 Milwaukee, Wisconsin 53202-3619 (414) 273-2100 Confirmation No. 31870</p>	
<p>1 of 1</p> <p>PAGE 15 * RCVD AT 9/27/2004 10:26:43 AM [Eastern Daylight Time] * SVR:USPTO-EFXXF-419 * DNIS:8729306 * CSID:414 224 5834 * DURATION (mm:ss):04:00 * 001</p>	

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Patent

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INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97/98

Sir:

In compliance with Applicant's duty of disclosure as set forth in 37 C.F.R. §1.56, listed on the attached Form PTO-1449 are those patents and other publications known to Applicant which may be considered material to the patentability of the claims of the above-identified application.

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Respectfully submitted,

Kristine M. Strodthoff

Kristine M. Strodthoff, Reg. No. 34259

Dated: September 9, 2004

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Patent

Attorney Docket No. MTI-31607

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE Alexandria, VA 22313 INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO.	Serial No.
	MTI-31607	10/050,507
	Applicant	Confirmation No.
	Teck Kheng Lee	7687
	Filing Date	Group Art Unit
	January 16, 2002	2813

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

Examiner Initial		Document Number	Publication Date	Country	Int'l Class	Sub-Class	Translation (Yes/No)
	A1	2000-183082	06-30-00	JP	H01L	21/566	Abstract
	A2	2001077294	03-23-01	JP	H01L	25/065	Yes
	A3	99/65282	12-16-99	WO	H05K	1/11	N/A

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

Examiner Initial		Non-Patent Document
	B1	Copy of Australian Patent Office, Search Report, 30 May 2003, 4 pages.
	B2	Al-sarawi, S. et al., "A Review of 3-D Packaging Technology," <i>Components, Packaging, and Manufacturing Technology, Part B: IEEE Transactions on Advanced Packaging</i> , Vol 21, Issue 1, Feb. 1998, pp. 2-14.
	B3	Andros, F. et al., "TBGA Package Technology," <i>Components, Packaging, and Manufacturing Technology, Part B: IEEE Transactions on Advanced Packaging</i> , Vol. 17, Issue 4, Nov. 1994, pp. 564-568.
	B4	Clot, Ph. et al., "Flip-Chip on Flex for 3D Packaging," 1999. 24 th IEEE/CPMT, 18-19 Oct. 1999, pp. 36-41.
	B5	Ferrando, F. et al., "Industrial Approach of a Flip-Chip Method Using the Stud-Bumps With a Non-Conductive Paste," <i>Adhesive Joining and Coating Technology in Electronics Manufacturing</i> , 2000. Proceedings. 4 th International Conference on, 18-21, June 2000, pp. 205-211.
	B6	Gallagher, C. et al., "A Fully Additive, Polymeric Process for the Fabrication and Assembly of Substrate and Component Level Packaging," <i>The First IEEE International Symposium on Polymeric Electronics Packaging</i> , 26-30, Oct. 1997, pp. 56-63.
	B7	Geissinger, J. et al., "Tape Based CSP Package Supports Fine Pitch Wirebonding," <i>Electronics Manufacturing Technology Symposium</i> , 2002, IEMT 2002, 27 th Annual IEEE/SEMI International, 17-18 July 2002, pp. 41-452.
	B8	Hatanaka, H., "Packaging Processes Using Flip Chip Bonder and Future Directions of Technology Development," <i>Electronics Packaging Technology Conference</i> , 2002. 4 th , 10-12, Dec. 2002, pp. 434-439.
	B9	Haug, R. et al., "Low-Cost Direct Chip Attach: Comparison of SMD Compatible FC Soldering with Anisotropically Conductive Adhesive FC Bonding," <i>IEEE Transactions on Electronics Packaging Manufacturing</i> , Vol. 23, No. 1, Jan 2000, pp. 12-18.

Examiner Initials	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

MKE/968557.1

1 of 2

09-09-2004

Patent

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	Filing Date	Group Art Unit
	January 16, 2002	2813

Examiner Initial		Non-Patent Document
	B10	Isaak, H. et al., "Development of Flex Stackable Carriers" IEEE Electronic Components and Technology Conference, 2000 Proceedings 50th, 5/21/2000-5/24/2000, Las Vegas, NV, USA, pp. 378-84, IEEE Catalog No: 00CH37070.
	B11	Kloeser, J. et al., "Fine Pitch Stencil Printing of Sn/Pb and Lead Free Solders for Flip Chip Technology," <i>IEEE Transactions of CPMT - Part C</i> , vol. 21, No. 1, 1998, pp. 41-49.
	B12	Kheng et al., "Enhancement of Moisture Sensitivity Performance of a FBGA," <i>Proceedings of International Symposium on Electronic Materials & Packaging</i> , 2000, pp. 470-475.
	B13	Li, L. et al., "Stencil Printing Process Development for Flip Chip Interconnect," <i>IEEE Transactions Part C: Electronics Packaging Manufacturing</i> , Vol. 23, Issue 3, July 2000, pp. 165-170.
	B14	Lyons, A. et al., "A New Approach to Using Anisotropically Conductive Adhesives for Flip-Chip Assembly, Part A," <i>IEEE Transactions on Components, Packaging, and Manufacturing Technology</i> , Vol. 19, Issue 1, March 1996, pp. 5-11.
	B15	Teo, Y. et al., "Enhancing Moisture Resistance of PBGA," <i>Electronic Components and Technology Conference</i> , 1998. 48 th IEEE, 25-28 May 1998, pp. 930-935.
	B16	Teutsch, T. et al., "Wafer Level CSP using Low Cost Electroless Redistribution Layer," <i>Electronic Components and Technology Conference</i> , 2000. 2000 Proceedings. 50 th , 21-24 May 2000, pp. Pages: 107-113.
	B17	"The 2003 International Technology Roadmap for Semiconductors: Assembly and Packaging", pp. 1-22
	B18	Tsui, C. et al. "Pad Distribution Technology for Flip Chip Applications", <i>1998 Electronic Components and Technology Conference</i> , pp. 1098-1102
	B19	Xiao, G. et al., "Reliability Study and Failure Analysis of Fine Pitch Solder-Bumped Flip Chip on Low-Cost Flexible Substrate Without Using Stiffener," <i>IEEE, 2002. Proceedings 52nd</i> , 28-31 May 2002, pp. 112-118.

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Patent

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Date: 9-20-4, 2004*Patricia Laye Pickun*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Respectfully submitted,

Kristine M. Strodthoff
Kristine M. Strodthoff, Reg. No. 34259Dated: September 20, 2004

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Customer No.: 31870

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1 of 1

Patent

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U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE Alexandria, VA 22313 INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO.	Serial No.
	MTI-31607	10/050,507
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	January 16, 2002	2813

U.S. PATENT DOCUMENTS

Examiner Initial		Document No.	Publication/ Issue Date	Patentee	U.S. Class	Sub-Class
	A1	3,239,496	03/1966	Jursich		
	A2	4,074,342	02/1978	Honn et al.		
	A3	4,807,021	02/1989	Okumura		
	A4	4,818,728	04/1989	Rai et al.		
	A5	5,366,794	11/1994	Nakao		
	A6	5,385,869	01/1995	Liu et al.		
	A7	5,386,341	01/1995	Olson et al.		
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	A11	5,422,205	06/1995	Inoue et al.		
	A12	5,438,477	08/1995	Pasch		
	A13	5,448,511	09/1995	Paurus et al.		
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	A15	5,489,804	02/1996	Pasch		
	A16	5,504,277	04/1996	Danner		
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	A19	5,663,530	09/1997	Schueller et al.		
	A20	5,668,405	09/1997	Yamashita		
	A21	5,674,785	10/1997	Akram et al.		
	A22	5,697,148	12/1997	Lance, Jr. et al.		
	A23	5,719,449	02/1998	Strauss		
	A24	5,721,151	02/1998	Padmanabhan et al.		
	A25	5,739,585	04/1998	Akram et al.		
	A26	5,742,100	04/1998	Schroeder et al.		
	A27	5,747,982	05/1998	Dromgoole et al.		
	A28	5,752,182	05/1998	Nakatsuka et al.		
	A29	5,758,413	06/1998	Chong et al.		
	A30	5,798,285	08/1998	Bentlage et al.		
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Examiner Initials	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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1 of 4

SEPT. 20, 2004

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Examiner Initial		Document No.	Publication/ Issue Date	Patentee	U.S. Class	Sub- Class
	A35	5,834,338	11/1998	Takeda et al.		
	A36	5,834,366	11/1998	Akram		
	A37	5,834,848	11/1998	Iwasaki		
	A38	5,835,355	11/1998	Dordi		
	A39	5,843,808	12/1998	Karnezos		
	A40	5,844,168	12/1998	Schueller et al.		
	A41	5,866,953	02/1999	Akram et al.		
	A42	5,886,408	03/1999	Ohki et al.		
	A43	5,891,753	04/1999	Akram		
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	A45	5,973,389	10/1999	Culnane et al.		
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	A52	6,005,776	12/1999	Holman et al.		
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Examiner Initial		Document No.	Publication/ Issue Date	Patentee	U.S. Class	Sub-Class
	A71	6,079,991	06/2000	Lemke et al.		
	A72	6,093,035	07/2000	Lemke et al.		
	A73	6,116,921	09/2000	Scholz et al.		
	A74	6,124,631	09/2000	Cardot et al.		
	A75	6,127,736	10/2000	Akram		
	A76	6,133,637	10/2000	Hikita et al.		
	A77	6,137,062	10/2000	Zimmerman		
	A78	6,137,164	10/2000	Yew et al.		
	A79	6,137,183	10/2000	Sako		
	A80	6,157,541	12/2000	Hacke		
	A81	6,165,885	12/2000	Gaynes et al.		
	A82	6,172,422 B1	01/2001	Chigawa et al.		
	A83	6,179,598 B1	01/2001	Brand		
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	A90	6,221,763 B1	04/2001	Gilton et al.		
	A91	6,225,688 B1	05/2001	Kim et al.		
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	A101	6,432,737 B1	08/2002	Webster		
	A102	6,468,831	10/2002	Leong et al.		
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	A104	6,489,676	12/2002	Taniguchi et al.		
	A105	6,489,687 B1	12/2002	Hashimoto		
	A106	6,492,737 B1	12/2002	Imasu et al.		

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MKE/971430.1

3 of 4

Patent

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Examiner Initial		Document No.	Publication/ Issue Date	Patentee	U.S. Class	Sub-Class
	A107	6,515,324 B2	02/2003	Shibuya et al.		
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	A115	2002/0167092 A1	11/2002	Fee et al.		
	A116	2002/0185661 A1	12/2002	Kawanobe et al.		

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